Corrections for *Mathematical Risk Analysis*
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We thank Tomonari Sei and Joachim Paulusch for several corrections.

red = to be replaced, green = to be inserted

| page | replace this text | correct text |
|---|---|---|
| $4_4$ | $P(X < x)$ | $P(Y < x)$ |
| $13_6$ | $(2 - 2\vartheta)1_{\{\vartheta \le x \le 1-\vartheta\}}$ | $(1 - 2\vartheta)1_{\{\vartheta \le x \le 1-\vartheta\}}$ |
| $13_6$ | $(1 - x - y)1_{\{0 \le x \le \vartheta\}}$ | $(1 - x - \vartheta)1_{\{0 \le x \le \vartheta\}}$ |
| $13_6$ | $(x - y)1_{\{x > 1-\vartheta\}}$ | $(x - \vartheta)1_{\{x > 1-\vartheta\}}$ |
| $13_4$ | $(\vartheta - x)1_{\{x < 1-\vartheta\}}$ | $(1 - \vartheta - x)1_{\{x < 1-\vartheta\}}$ |
| $15_8$ (1.41) | $F_d(x_d, \lambda_d \| x_1, \dots, x_{d-1})$ | $F_n(x_n, \lambda_n \| x_1, \dots, x_{n-1})$ |
| $16_{5/6}$ | Rü(1981b) | Rü(1981d) |
| $19_5$ (1.56) | $c_{i-1,i\|x_1,\dots,x_{i-2}} f_{i\|x_1,\dots,x_{i-1}}(x_i)$ | $c_{i-1,i\|x_1,\dots,x_{i-2}} f_{i\|x_1,\dots,x_{i-2}}(x_i)$ |
| $19_3$ (1.57) | $\prod_{i=2}^{n} \prod_{k=1}^{i-1} c_{i-1,i\|1,\dots,i-k-1} f_k(x_i)$ | $\prod_{i=2}^{n} \prod_{k=1}^{i-1} c_{i-1,i\|1,\dots,i-k-1} f_i(x_i)$ |
| $19_2$ (1.57) | $\left(\prod_{i=2}^{n} \prod_{k=1}^{k-1} c_{i-1,i\|1,\dots,i-k-1}\right)$ | $\left(\prod_{i=2}^{n} \prod_{k=1}^{i-1} c_{i-1,i\|1,\dots,i-k-1}\right)$ |
| $25^9$ | $Q \stackrel{d}{=} Q$ | $Y \stackrel{d}{=} Q$ |
| $31_7$ (1.86) | $f_{(1)} := f_{R_1}$ | $f_{(1)} := f - f_{R_1}$ |
| $33^7$ | where $g^{T_J} = 0$ if $T_J$ is empty | where $g^{T_J} = 1$ if $T_J$ is empty |
| $33_1$ | $h_{R_1^c} = g^{T_1}$ | $h_{R_1} = g^{T_1}$ |
| $34^{14}$ | $f_{23}(x_1, x_3)$ | $f_{23}(x_2, x_3)$ |

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| $42_{17}$ | $S \leq U$ | $S \leq I$ |
| $43^{6}$ | $\mathcal{L}^1(E, \mathcal{R}, P)$ | $\mathcal{L}^1(E, \mathfrak{R}, P)$ |
| $43^{8,9}$ | $P \in \widetilde{M}$ | $\widetilde{\mathcal{P}} \in \widetilde{\mathcal{M}}$ |
| $45^{5,7,13}$ | $\mathcal{M}_1(E, \mathfrak{A})$ resp. $M^1(E, \mathfrak{A})$ | $\mathcal{M}^1(E, \mathfrak{A})$ |
| $46_5$ | $F_i^{-1}$ | $F_i^{-1}(x)$ |
| $47_5$ | Rü (1980)) | Rü (1981)) |
| $48^{13}$ (2.42) | $M(Q, P_{n+1})$ | $\mathcal{M}(Q, P_{n+1})$ |
| $48_{12}$ | $M(A_1 \times \cdots \times A_n)$ | $M(A_1 \times \cdots \times A_{n+1})$ |
| $48_{12}$ | $\sup\limits_{P \in M(Q, P_{n+1})}$ | $\sup\limits_{P \in \mathcal{M}(Q, P_{n+1})}$ |
| $49_6$ | $\sum\limits_{i=1}^{n} (F_i(b_i) - F_i(a_i))$ | $\sum\limits_{i=1}^{n} \big(F_i(b_i) - F_i(a_i) - (n-1)\big)_+$ |
| $63_4$ | $(R^n, B^n)$; $R^1$ | $(\mathbb{R}^n, \mathfrak{B}^n)$; $\mathbb{R}^1$ |
| $72^2$ | $\mathrm{VaR}_\alpha \left( \sum\limits_{i=1}^{n} X_i \right) \leq M_n^{-1}(\alpha)$ | $\mathrm{VaR}_\alpha \left( \sum\limits_{i=1}^{n} X_i \right) \geq M_n^{-1}(\alpha)$ |
| $74_1$ | $g \circ h \leq t$ | $g \circ h(t) \leq t$ |
| $75^{11}$ | $\varphi(s) = h(t) - s$, $0 \leq s \leq h(t)$ and $\varphi(s) = s$, $h(t) \leq s \leq 1$. | $\varphi(s) = s$, $0 \leq s \leq h(t)$ and $\varphi(s) = 1 - s$, $h(t) \leq s \leq 1$. |
| $75^{12}$ | are a worst case pair concerning | maximizes |
| $75^{14}$ | Proposition 4.5 (Worst case pairs). | Proposition 4.5 (Maximizing pairs). |
| $75_{13}$ | $\lambda^{F_i^{-1} \circ \varphi} = \varphi^{F_i^{-1}}$ | $\lambda^{F_i^{-1} \circ \varphi} = \lambda^{F_i^{-1}}$ |
| $75^{7}$ | interval $[h(t), 1]$ | interval $[0, h(t)]$ |
| $75_4$ | $f^\alpha \sim_{\mathrm{r}} F_j^{-1}$ | $f_j^\alpha \sim_{\mathrm{r}} F_j^{-1}$ |
| $75_3$ | $f_1^\alpha(s) + f_2^\alpha(s) = t$ | $f_1^\alpha(s) + f_2^\alpha(s) \geq t$ |
| $76^{6}$ | $m_n(t) = 1 - \sup\big\{ \dots$ | $m_n(t) = 1 - \inf\big\{ \dots$ |
| $76^{9}$ | $M_n(t) \geq P(f_1^\alpha + \cdots + f_n^\alpha) \leq t$ | $M_n(t) \geq P(f_1^\alpha + \cdots + f_n^\alpha \leq t)$ |

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| $80_7$ | $= \int_0^{P(S<s)} G(t)dt + ...$ | $\geq \int_0^{P(S<s)} G(t)dt + ...$ |
| $81_{10}$ | and decreasing in $t$ | and increasing in $t$ |
| $83^{7,9}$ | $\sum_{i=1}^{n} X_i$ | $\sum_{i=1}^{n} x_i$ |
| $83_6$ | $\frac{\cdots}{\cdots} - d + 1$ | $\frac{\cdots}{\cdots} - n + 1$ |
| $84_6$ | $\inf_{s\in[0,s/n]} \frac{\int\cdots}{t-nr}$ | $\inf_{r\in[0,s/n]} \frac{\int\cdots}{s-nr}$ |
| $84_6$ | $P\left(\sum_{i=1}^{n} X_i \geq s\right)$ | $P\left(\sum_{i=1}^{n} X_i < s\right)$ |
| $85^{10}$ | $\geq 1_{[s,\infty)}$ | $\geq 1_{[s,\infty)}\left(\sum_{i=1}^{n} x_i\right)$ |
| $85_5$ | $g_a(x) := \begin{cases} \cdots \\ \cdots, \text{if } a \leq \\ \cdots \end{cases}$ | $g_a(x) := \begin{cases} \cdots \\ \cdots, \text{if } t \leq \\ \cdots \end{cases}$ |
| $92_6$ | $G$ be a $d$-dimensional | $G$ be a $n$-dimensional |
| $93_{11}$ | when $d = 2$ | when $n = 2$ |
| $94^3$ | $G$ and $\bar{G}$ | $G$ and $1-\bar{G}$ |
| $139^4$ | $Z_i \sim \mathcal{B}(1, \frac{1}{1000})$ | $Z_i \sim \mathcal{B}(1, \frac{1}{1100})$ |
| $145^7$ | monotone, positive homogeneous | monotone, cash invariant, positive homogeneous |
| $146^6$ | $X = L^0$ | $\mathcal{X} = L^0$ |
| $147^1 1$ | neither homogeneous | neither subadditive |
| $148_1$ | $= \frac{1}{\alpha}\left(EX1_{\{X\geq F^{-1}(\alpha)\}} + \ldots\right.$ | $= \frac{1}{1-\alpha}\left(EX1_{\{X\geq F^{-1}(\alpha)\}} + \ldots\right.$ |
| $149_{10}$ | $= \frac{1}{\alpha}\int_{1-\alpha}^{1} F^{-1}(u)du$ | $= \frac{1}{1-\alpha}\int_{1-\alpha}^{1} F^{-1}(u)du$ |
| $156^{13}$ | $Q \in M_1$ | $Q \in \mathcal{M}_1$ |
| $171^8$ | $L_\alpha^\infty(P)$ | $L_0^\infty(P)$ |
| $173_{13}$ | Lemma 2.2 | Lemma 2.3 |
| $186_8$ | $\varrho(Y)$ | $\varrho(X)$ |

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| $200^{3}$ | $T_{ij} := \Sigma_j^{1/2}(\Sigma_j^{1/2}\Sigma_i\Sigma_j^{1/2})\Sigma_j^{1/2}$ | $T_{ij} := \Sigma_i^{-1/2}\left(\Sigma_i^{1/2}\Sigma_j\Sigma_i^{1/2}\right)^{1/2}\Sigma_i^{-1/2}$ |
| $201^{10}$ | $\sum_{i=1}^{3}\left(\Sigma_0^{1/2}\Sigma_i\Sigma_0^{1/2}\right)^{1/2} = \Sigma_0$ | $\sum_{i=1}^{3}\left(\Sigma_i^{1/2}\Sigma_0\Sigma_i^{1/2}\right)^{1/2} = \Sigma_0$ |
| $201^{15}$ | $S_i = \Sigma_i^{1/2}\left(\Sigma_i^{1/2}\Sigma_0\Sigma_i^{1/2}\right)^{-1/2}\Sigma_i^{1/2}.$ | $S_i = \Sigma_0^{-1/2}\left(\Sigma_0^{1/2}\Sigma_i\Sigma_0^{1/2}\right)^{1/2}\Sigma_0^{-1/2}.$ |
| $201^{16}$ | between $N(0,\Sigma_0)$ and $N(0,\Sigma_i)$ | between $N(0,\Sigma_i)$ and $N(0,\Sigma_0)$ |
| $202_{13}$ | $\sum_{i=1}^{n}\left(\Sigma_0^{1/2}\ \Sigma_i\ \Sigma_0^{1/2}\right)^{1/2} = \Sigma_0$ | $\sum_{i=1}^{n}\left(\Sigma_i^{1/2}\ \Sigma_0\ \Sigma_i^{1/2}\right)^{1/2} = \Sigma_0$ |
| $202_{11}$ | $S_i = \Sigma_i^{1/2}\left(\Sigma_i^{1/2}\Sigma_0\Sigma_i^{1/2}\right)^{-1/2}\Sigma_i^{1/2}\dots$ | $S_i = \Sigma_0^{-1/2}\left(\Sigma_0^{1/2}\Sigma_i\Sigma_0^{1/2}\right)^{1/2}\Sigma_i^{-1/2}\dots$ |
| $203^{1}$ | $A = \Sigma_n^{-1/2}\left(\Sigma_n^{1/2}\ \Sigma_{T_n}\Sigma_n^{1/2}\right)^{1/2}\Sigma_n^{-1/2}.$ | $A = \Sigma_{T_n}^{-1/2}\left(\Sigma_{T_n}^{1/2}\ \Sigma_n\Sigma_{T_n}^{1/2}\right)^{1/2}\Sigma_{T_n}^{-1/2}.$ |
| $203_{4}$ | $\sum_{i=1}^{n}\left(\Sigma_0^{1/2}\Sigma_i\Sigma_0^{1/2}\right)^{1/2} = \Sigma_0,$ | $\sum_{i=1}^{n}\left(\Sigma_i^{1/2}\Sigma_0\Sigma_i^{1/2}\right)^{1/2} = \Sigma_0,$ |
| $203_{1}$ | $\sum_{i=1}^{n}(K_0K_i^2K_0)^{1/2} = K_0^2,\ \dots$ | $\sum_{i=1}^{n}(K_iK_0^2K_i)^{1/2} = K_0^2,\ \dots$ |
| $204^{2}$ | $K_0^{(k+1)} = \left(\sum_{i=1}^{n}\left(K_0^{(k)}\ K_i^2\ K_0^{(k)}\right)^{1/2}\right)^{1/2}.$ | $K_0^{(k+1)} = \left(\sum_{i=1}^{n}\left(K_i^{(k)}\ K_0^2\ K_i^{(k)}\right)^{1/2}\right)^{1/2}.$ |
| $212_{16}$ | $:= \sup_{\widetilde{X}_i\sim X_i}$ (both occurencies) | $:= \inf_{\widetilde{X}_i\sim X_i}$ |
| $212_{3}$ | Then it it holds that: | Then it holds that: |
| $318^{13}$ | Theorem 12.14 | Theorem 12.12 |
| $321^{2}$ | $(X^c - d^*)$ | $(X^c - d^*)_+$ |
| $345_{12,11}$ | $(\Psi f^1 - (\Psi f)^1)^{1/2}$ | $(\Psi f^2 - (\Psi f)^2)^{1/2}$ |
| $346^{11}$ | $-(\Psi f \cdot 1_{B_\delta})$ | $-\Psi(f \cdot 1_{B_\delta})$ |
| $347^{13}$ | (13.5) | (13.50) |
| $347_{1}$ | $(\mathbb{G}_\psi u, \dots)$ | $(\mathbb{G}_{k,\psi_u}, \dots)$ |
| $350_{10}$ | $\mathrm{VaR}_{1-\lambda}$ | $\mathrm{VaR}_\lambda$ |
| $378_{16}$ | $-\nu_i^*(-[\infty, x]^c)$ | $-\nu_i^*(-(\infty, x]^c)$ |